One year ago, an intrepid team of JSC workers set out on a voyage of discovery that culminates next month with the grand opening of the Earth's newest pyramid. With a multitude of ideas and free rein to use all the creativity they could muster, the small band laid the foundation for what would become a feature attraction in Moody Garden's new…

Discovery Pyramid

By Kelly Humphries

When JSC employees take advantage of their two-for-one tickets to the new Discovery Pyramid at Moody Gardens next weekend, they'll be experiencing concepts and ideas that were built by their coworkers, block by block.

At times, as many as 150 to 200 JSC workers were involved in the development of the "edutainment" complex, designed to share why NASA and JSC are doing the things they are doing with the 700,000 to 1 million visitors expected each year.

"This has just been a tremendous effort when you think about the time frame of the project," said Wayne Ordway, a systems integration manager in the Space Shuttle Program Office who was part of the original concept development team and shouldered much of the responsibility for the implementation effort. "We started this on June 4, 1996, and it is going to open June 7, so in almost exactly one year this has gone from an idea to a completed exhibit. It has been an extraordinary team effort across the entire JSC community, Moody Gardens community and Southwest Museum Services."

Southwest Museum Services is the Houston-based contractor selected by Moody Gardens to build the exhibits from the conceptual framework developed at JSC. Southwest is now working to complete fabrication and installation of the exhibits to support a June 7 public grand opening.

The first-floor attraction of the new pyramid will be an IMAX Ridefilm Theatre, which will be premiering "Asteroid Adventure." Much like the "Back to the Future" ride at the Universal Studios theme parks, the theater will use three wrap-around IMAX screens and motion-based platforms to provide the sights, sounds and movement of a space flight adventure.

The second floor will house the human space flight exhibits developed in consultation with the JSC team, which have been built around the futuristic theme of "Living in the Stars."

The first thing visitors will do is pass through a "time wall" entry way that sets the stage for thinking about the future of space flight by presenting historic imagery of science and technology from the Renaissance through Sputnik.

Once acclimated, they will enter a central area featuring a three- to 10-minute-long full-motion, hologram-like movie that will present historical figures such as Leonardo Da Vinci and Albert Einstein explaining discoveries that have made human space exploration possible and hinting at what may be yet to come.

On the visitors' left will be the "Living in Space" area that shows the unique challenges posed by the space environment. This area also will include a space habitat mock-up that showcases life sciences activities at JSC.

Nearby will be a Mission Control mock-up, provided by United Space Alliance, which shows the kind of ground support required for successful space flights.

Next, a cross-fade mural will pick up where the time wall left off at the dawn of the modern space age, highlighting the accomplishments of NASA. The multimedia presentation of video and slide imagery will be complemented by an audio soundtrack.

From the mural, visitors will proceed on to the "Space Travel" area that explains how space transportation works, and the "Destinations" area that is designed to excite visitors about the promise of the future and relate the agency's vision of the future of space flight and interplanetary travel. It will focus on the exciting challenges of long-duration space flight, in particular human flights back to the Moon, on to Mars and beyond.

The final exhibit will be called "NASA-The Future…." This JSC-prepared exhibit will feature a video and surround sound presentation that integrates all of the other exhibits. Included in this exhibit will be interactive kiosks and an Internet access terminal with links to a variety of NASA web sites designed to pique visitors' interest in doing more research on their own from home. "We want to communicate to the public NASA's ambitious vision for the future and how our activities today are laying the foundation for that future," Ordway said.

Although the NASA-specific exhibit will premiere at Moody Gardens, JSC plans to make it a central element in its traveling exhibits program that can be used in many other venues in the future, Ordway said.

"Our goal is to have them come away with an understanding of why we're doing the things were doing," said Deputy Human Resources Director Greg Hayes, who has been a prime point of contact for cooperative activities with Moody Gardens—including the recent highly successful NASA display at Baybrook Mall. "Why do we have a space shuttle? Why do we have a space station program? Why are we worried about life sciences issues? How can we fit those together to help us go off and do human exploration that we all want to do in the future?"

The "gem" on display in the NASA-The Future area will be a large, rotating half globe of Mars' northern hemisphere lighted from the inside. The half globe was fabricated in JSC's Bldg. 9 model shop by Bill Carson and John Muro, who blew the bubble out of 1/4-inch Plexiglass and used clear epoxy to add craters and other distinctive Martian features. The globe took about a month to build and, although not entirely accurate, was based on actual photographs of the Red Planet.

"We had a great set of teamwork exhibited by our people," said Frank Hughes, chief of the Mission Operations Directorate's Space Flight Training Division, who led the initial concept development phase of the project, "and the best thing that comes out of JSC all the time is innovation - so many great ideas, far more than Moody Gardens can afford to build."

The whole project began a year ago when the Moody Foundation approached JSC Director George Abbey with the idea of collaborating on the next phase of its expansion program. Abbey's associate director for management, Sue Garman, gathered 50 JSC workers from virtually every center organization and challenged them to come up with ideas. The group was broken into five separate teams and each team developed its own set of ideas independently.

"It was an excellent strategy because it placed the five teams in a friendly competition to come up with ideas," Ordway said. "We all put together briefings that summarized the best of each group's concepts. At this point, there were no constraints. Nobody knew about the Discovery Pyramid. There was no definition as to how many or how few Moody Gardens facilities we could use. The job at hand was to conceptualize what could be accomplished within the framework of a cooperative partnership. It was that open. As you might imagine, we ended up with a wide assortment of creative and interesting ideas."

The five teams' proposals had much in common from a conceptual standpoint, although there were many different approaches for communicating the variety of JSC activities that support human space flight. After each group's ideas were discussed, a proposal was prepared that highlighted the most promising of the many ideas.

After the JSC proposal had been reviewed, adjusted and approved by the center director, the team presented its ideas to the Moody Gardens staff. They took a week or two to review the proposal, then in September said they would like to pursue a partnership based on the JSC ideas and using JSC as expert consultants.

With this commitment, Moody Gardens designated the new Discovery Pyramid as the venue for the cooperative alliance.

A smaller JSC team was organized to assist with the next phase of the consulting effort. Engineers, scientists and space operations experts who formed the team first had to get a feel for what they were trying to accomplish.

"The first thing we did was, we peeled off a few of them as representatives and sent them to other museums to learn how it gets done and what makes a good exhibit," Hughes said. "Most museums would love to have this kind of committee working for them."

Next, the JSC team focused on preparing a conceptual design for the second floor exhibits. "What we really did was synthesize the best and brightest ideas from the original 50 team members into a practical floor plan with specific exhibit designs that could be accommodated within a 6,000 square feet area, which is basically what we had to work with on the second floor of the Discovery Pyramid," Ordway said. "Ultimately, we found that we could best showcase a broad sampling of JSC's human space flight activities by consolidating specific exhibit ideas within the theme areas of discover our universe, discover ourselves in space, discover space travel and discover future worlds."

Southwest Museum Services was signed on as the contractor in October. By the end of the year, a basic floor plan built around the major theme areas created at JSC was in place. The contractor emphasized entertainment, while the JSC consultants continued to press for educational value and interaction.

"In the end I think we've struck a reasonable balance between the educational and interactive elements of the exhibits, and the entertainment value of the exhibits," Ordway said. "Southwest has really done an excellent job in capturing the essence of what we proposed in our conceptual design and then making that entertaining and interesting to the public at large."

Construction began after a final design review in February, and installation of the exhibits began early this month. JSC's most valuable contribution has been in giving Southwest a tremendous headstart with the exhibit plan and providing timely consulting expertise from across the center to assist with development of the many exhibits. "We've basically enabled Southwest to hit the ground running which was critical, given the ambitious exhibit design and fabrication schedule," Ordway said.

"When it opens on June 7, it is going to blow everybody away," said Mike Riley, executive director of Moody Gardens. "We can't say enough about how valuable NASA's expertise and assistance have been on this project. From offering the creative ideas for the exhibits to assisting in the actual design, the folks at Johnson Space Center have played a key role in the development of this next phase of Moody Gardens."

Hayes said the cooperative effort is in tune with JSC's need to tell the story of human space flight in as many different places and ways as possible. The effort spotlights the fact that at JSC, it is everyone's job to help explain to the public what NASA is doing and why.

"This demonstrates once again how effective we can be at communicating NASA's mission and JSC's reason for being if we work together and with the greater Houston community to tell the story of human space flight," Hayes said. "Every one of us has a responsibility, in one way or another, to help spread the message of how important our work is."

That type of cooperation, both internally at JSC, and externally has been a hallmark of the Moody Gardens activity, all agreed.

"This entire project has been an example of outstanding community collaboration and teamwork," Ordway said. "Everyone involved at JSC has felt a sense of ownership in this project and went beyond their normal job responsibilities to make it a success. It was really just a group of talented people committing their time and effort in a very motivated way."

"I think its worked extremely well," Hayes added. "The folks at Moody Gardens are very much interested in helping us get the story out about the space program. They think it fits well with their charter to educate the public. They are hungry for our knowledge and expertise and we are always looking for another outlet and venue to tell our story."

Hayes, Hughes and Ordway emphasized that the Moody Gardens effort is designed to augment, not eclipse the activities of Space Center Houston, JSC's official visitor center. Indeed, the activity has opened a whole new realm of cooperative possibilities between the two major tourist attractions, such as offering each other's tickets.

"What we're going to find is a real sisterhood between Space Center Houston and Moody Gardens," Hughes predicted. "It is not going to be one eclipses the other, they're going to find a way to work really closely together and make our presence in the community even bigger." ❑